In the United States Patent and Trademark Office on Appeal from the Examiner to the Board of Patent Appeals and Interferences

In re Application of:	Anders Vinberg
Serial No.	09/982,301
Filing Date:	October 17, 2001
Art Unit No.:	2154
Examiner:	Ashokkumar B. Patel
Title:	*Method and Apparatus for Selectively Displaying Layered Network Diagrams*

Mail Stop: Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

CERTIFICATE OF MAILING
BY EXPRESS MAIL
Exp. Mail Receipt No. EV 733643832 US

I hereby certify that this communication is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" under 37 C.F.R. § 1.10 on the date indicated below and is addressed to Commissioner For Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Willie Jiles
Willie Jiles

Date: February 28, 2006

Dear Sir:

Appeal Brief

Appellant has appealed to the Board of Patent Appeals and Interferences from the decision of the Examiner mailed July 25, 2005, finally rejecting Claims 1-23, which are all pending in this case. Appellant filed a Notice of Appeal on November 3, 2005. Appellant respectfully submits this Appeal Brief with the statutory fee of $500.00.

03/02/2006 YPOLITE1 00000080 09982301
01 FC:1402 500.00 OP

Table of Contents

Real Party in Interest 3
Related Appeals and Interferences 4
Status of Claims 5
Status of Amendments 6
Summary of Claimed Subject Matter 7
Ground of Rejection for Review on Appeal 9
Argument 10
Conclusion 14
Claims Appendix 15
Evidence Appendix 21

Real Party in Interest

Computer Associates Think, Inc., currently owns this application. An assignment recorded May 31, 2002, in the Assignment Records of the United States Patent and Trademark Office at Reel 012940, Frames 0878-0882, indicates current ownership of this application by Computer Associates Think, Inc.

Related Appeals and Interferences

No known appeals, interferences, or judicial proceedings are related to or will directly affect or have a bearing on the Board's decision on this appeal. The Board's decision on this Appeal will not affect any known appeals, interferences, or judicial proceedings.

Status of Claims

Claims 1-23 are pending in this application and all stand rejected under a Final Office Action mailed July 25, 2005. Appellant presents Claims 1-23 for appeal. The attached Claims Appendix shows all pending claims.

Status of Amendments

In the Response filed September 26, 2005, Appellant amended independent Claims 10, 19, 21, and 23 to correct minor typographical errors. Appellant does not know the status of the amendments to independent Claims 10, 19, 21, and 23. In the Advisory Action mailed October 27, 2005, the Examiner does not indicate whether the Examiner has entered any of the amendments in the Response filed September 26, 2005.

Summary of Claimed Subject Matter

The disclosed system is in the field of managing networked computer systems that are used in various aspects of a complex business organization that can be monitored by computer technology. (Page 2, Lines 18-20). More particularly, the disclosed system concerns a method and apparatus for network analysis by selectively displaying layered network diagrams to show the state of one or more links, connections or hardware/software relationships that may exist between components of a network. (Page 2, Lines 20-23).

Figure 2A illustrates a typical network topology user display 200 showing the representation of a server 202 and a workstation 204 depicted visually as icons and stored as objects within repository 102. (Page 5, Lines 15-17). A link 206 connects server 202 and workstation 204 indicating at least one physical or logical relationship between the server and the workstation. (Page 5, Lines 17-19). Given the depiction of a single link 206 between the server 202 and the workstation 204, and the number of ways that server 202 and workstation 204 could be related, link 206 fails to provide meaningful information. (Page 5, Lines 19-21).

Figure 2B illustrates a preferred network topology user display 208 showing a more detailed connection between server 202 and workstation 204. (Page 5, Lines 22-23). User display 208 selectively depicts the network topology represented in repository 102. (Page 5, Lines 23-24). Display 208 provides additional information relating to the link between server 202 and workstation 204. (Page 5, Lines 24-25). Display 208 selectively presents the network topology according to a particular level of abstraction. (Page 5, Lines 26-27) .In the case of display 208, individual links 210, 212 and 214 are depicted which represent the levels of an industry-standard "stack" representation of the network such as an Open System Interconnection ("OSI") stack, specifically the network 210, transport 212, and application 214 layers are depicted. (Page 5, Lines 27-30).

The network layer represents the services in the OSI protocol stack that provide internetworking for a communications session. (Page 6, Lines 1-2). The transport layer represents the services in the OSI protocol stack that provide end-to-end management of the communications session. (Page 6, Lines 2-3). The Application layer represents the software in the OSI protocol stack that provides the starting point of the communications session. (Page 6, Lines 3-5). Displaying separate links for specific layers of a stack enables the user

to more accurately determine the state of the relationship between any two network nodes. (Page 6, Lines 5-7).

Figure 2C illustrates an alternate network topology user display 210 showing a more detailed connection between server 202 and workstation 204 according to a different level of abstraction. (Page 6, Lines 8-10). User display 210 selectively depicts the network topology represented in repository 102 by displaying individual links 218, 220 and 222. (Page 6, Lines 10-11). In this alternative embodiment, the individual links 218, 220 and 222 represent the specific protocols running on the various levels of the "stack" representation of the network, namely Internet Protocol ("IP"), Transmission Control Protocol ("TCP") and File Transfer Protocol ("FTP"), respectively. (Page 6, Lines 11-14).

Figure 2D illustrates another alternate network topology user display 224 showing a detailed connection between server 202 and workstation 204 according to yet a different level of abstraction. (Page 6, Lines 15-17). User display 224 selectively depicts the network topology represented in repository 102 by displaying individual links 226 and 218. (Page 6, Lines 17-18). In this alternative embodiment, the individual links 226 and 218 represent the different types of specific protocols running on a particular layer. (Page 6, Lines 18-20). Links 226 and 218 represent Hypertext Transfer Protocol ("HTTP") and FTP, respectively, both of which run in the application layer. (Page 6, Lines 20-21).

Grounds of Rejection for Review on Appeal

Appellant requests the Board to review the Examiner's rejection of independent Claims 1, 18, 20, and 22 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,787,252 to Schettler et al. ("*Schettler*").

Appellant also requests the Board to review the Examiner's rejection of independent Claims 10, 19, 21, and 23 under 35 U.S.C. § 102(b) as being anticipated by *Schettler*.

Argument

For at least the following reasons, the Examiner's rejection of Claims 1-23 is improper and the Board should reverse the Examiner's rejection.

Independent Claims 1, 18, 20, and 22 are Allowable over *Schettler*

The Examiner rejects independent Claims 1, 18, 20, and 22 under 35 U.S.C. § 102(b) as being anticipated by *Schettler*.

As Appellant discussed in the Response mailed September 26, 2005, *Schettler* merely discloses a discovery mechanism for determining network topology data, a layout mechanism for converting the network topology data to map data and for driving a display with the map data, and a filtering system that filters objects from the topology data. (Column 2, Lines 23-47). In *Schettler*, a network, a segment, a computer, a router, a repeater, and a repeater are examples of an object. (Column 6, Lines 41-43). The filtering system filters objects from the topology data by type and maintains a filtering library that specifies objects for communication from the discovery mechanism to the layout mechanism. (Column 6, Lines 51-55, and Column 7, Lines 32-34). Example filters in the filtering library include filters for various nodes, routers, connectors, and segments. (Column 8, Lines 60-63). The filtering library determines whether an object is an allowable object or a nonallowable object. (Column 6, Lines 55-57). The layout mechanism converts only allowable objects into map data and displays them. (Column 6, Lines 57-60).

As Appellant further discussed in the Response mailed September 26, 2005, *Schettler* fails to disclose, teach, or suggest ***filtering network links for display based on the level of abstraction***, as recited in independent Claim 1. The filtering system in *Schettler* filters objects out of network topology data only by type. Therefore, even assuming for the sake of argument that objects in *Schettler* could be properly considered ***network links***, as recited in independent Claim 1, *Schettler* would still fail to disclose, teach, or suggest filtering any such objects ***based on the level of abstraction***, as recited in independent Claim 1. Moreover, because *Schettler* fails to disclose, teach, or suggest ***filtering network links for display based***

on the level of abstraction, as recited in independent Claim 1, *Schettler* also necessarily fails to disclose, teach, or suggest ***displaying the filtered network links to present a layered network diagram***, as further recited in independent Claim 1.

In the Advisory Action mailed October 27, 2005, the Examiner discusses the hierarchical structure of the network management map in *Schettler* and the ability of a user to "explode" an object in the map to receive data pertaining to the object can be properly considered. However, the Examiner's discussion of *Schettler* fails to demonstrate that the network management map in *Schettler* or "exploding" an object in the map discloses, teaches, or suggests ***filtering network links for display based on the level of abstraction***, as recited in independent Claim 1. Instead, the layout mechanism in *Schettler* relies on the hierarchical structure of the network management map in *Schettler* and the ability of a user to "explode" an object in the map to display more data, which tends to teach away from ***filtering network links for display based on the level of abstraction***, as recited in independent Claim 1.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987); M.P.E.P. ch. 2131 (Rev. 1, Feb. 2003) (quoting *Verdegaal Bros.*, 2 U.S.P.Q.2d at 1053). Moreover, "the identical invention must be shown in as complete detail as is contained . . . in the claim." *Richardson v. Suzuki Motor Co.*, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989); M.P.E.P. ch. 2131 (Rev. 1, Feb. 2003) (quoting Richardson, 9 U.S.P.Q.2d at 1920). Furthermore, "[t]he elements must be arranged as required by the claim." *In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990); M.P.E.P. ch. 2131 (Rev. 1, Feb. 2003) (quoting *In Re Bond*, 15 U.S.P.Q.2d at 1566). As shown above, *Schettler* fails to disclose, teach, or suggest each and every limitation recited in independent Claim 1, as required under the M.P.E.P. and governing Federal Circuit caselaw. Independent Claims 18, 20, and 22 are similar to independent Claim 1, and *Schettler* similarly fails to disclose, teach, or suggest each and every limitation recited in independent Claims 18, 20, and 22, respectively.

For at least these reasons, the Board should reverse the Examiner's rejection of independent Claims 1, 18, 20, and 22 and dependent Claims 2-9, which depend on independent Claim 1, and instruct the Examiner to issue a notice of allowance of Claims 1-9, 18, 20, and 22.

Independent Claims 10, 19, 21, and 23 are Allowable Over *Schettler*

The Examiner also rejects independent Claims 10, 19, 21, and 23 under 35 U.S.C. § 102(b) as being anticipated by *Schettler*.

Appellant discusses *Schettler* above.

As Appellant discussed in the Response mailed September 26, 2005, *Schettler* fails to disclose, teach, or suggest ***filtering the at least one object based on the level of abstraction***, as recited in independent Claim 10. The filtering system in *Schettler* filters objects out of network topology data only by type. Therefore, even assuming for the sake of argument that objects in *Schettler* could be properly considered ***the at least one object***, as recited in independent Claim 10, *Schettler* would still fail to disclose, teach, or suggest filtering any such objects ***based on the level of abstraction***, as recited in independent Claim 10. Moreover, Because *Schettler* fails to disclose, teach, or suggest ***filtering the at least one object based on the level of abstraction***, as recited in independent Claim 10, *Schettler* also necessarily fails to disclose, teach, or suggest ***displaying the at least one filtered object to present a layered network diagram***, as further recited in independent Claim 10.

As discussed above, in the Advisory Action mailed October 27, 2005, the Examiner discusses the hierarchical structure of the network management map in *Schettler* and the ability of a user to "explode" an object in the map to receive data pertaining to the object can be properly considered. However, the Examiner's discussion of *Schettler* fails to demonstrate that the network management map in *Schettler* or "exploding" an object in the map discloses, teaches, or suggests ***filtering the at least one object based on the level of abstraction***, as recited in independent Claim 10. Instead, the layout mechanism in *Schettler* relies on the

hierarchical structure of the network management map in *Schettler* and the ability of a user to "explode" an object in the map to display more data, which tends to teach away from ***filtering the at least one object based on the level of abstraction***, as recited in independent Claim 10.

Schettler fails to disclose, teach, or suggest each and every limitation recited in independent Claim 10, as required under the M.P.E.P. and governing Federal Circuit caselaw. Independent Claims 19, 21, and 23 are similar to independent Claim 10, and *Schettler* similarly fails to disclose, teach, or suggest each and every limitation recited in independent Claims 19, 21, and 23, respectively.

For at least these reasons, the Board should reverse the Examiner's rejection of independent Claims 10, 19, 21, and 23 and dependent Claims 11-17, which depend on independent Claim 10, and instruct the Examiner to issue a notice of allowance of Claims 10-17, 19, 21, and 23.

Conclusion

Appellant has demonstrated that the present invention, as claimed, is clearly distinguishable over the prior art cited by the Examiner. Therefore, Appellant respectfully requests the Board of Patent Appeals and Interferences to reverse the Examiner's final rejection of the pending claims and instruct the Examiner to issue a notice of allowance of all pending claims.

Appellant has enclosed a check in the amount of $500.00 for this Appeal Brief. Appellant has also enclosed a check in the amount of $450.00 for a two-month extension of time. The Commissioner is hereby authorized to charge any fee and credit any overpayment to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

BAKER BOTTS L.L.P.
Attorneys for Appellant

Travis W. Thomas
Reg. No. 48,667

Date: February 28, 2006

Correspondence Address:

Customer Number 05073

Claims Appendix

1. (Original) A method for analyzing links between components of a computer system, comprising:

receiving input associated with a level of abstraction;

determining the level of abstraction based on the input;

filtering network links for display based on the level of abstraction; and

displaying the filtered network links to present a layered network diagram.

2. (Original) The method of claim 1, wherein the input is a user identification.

3. (Original) The method of claim 1, wherein the level of abstraction represents at least one protocol.

4. (Original) The method of claim 1, wherein each displayed network link represents a layer of an industry standard stack.

5. (Original) The method of claim 4, wherein the layer of the industry standard stack is selected from the group consisting of the layers of an Open System Interconnection (OSI) protocol stack.

6. (Original) The method of claim 1, wherein each network link represents a protocol.

7. (Original) The method of claim 6, wherein the protocol is selected from the group consisting of Internet Protocol (IP), Transmission Control Protocol (TCP), File Transfer Protocol (FTP) and Hypertext Transfer Protocol (HTTP).

8. (Original) The method of claim 1, wherein filtering includes identifying any network link that represents a relevant propagated failure regardless of the level of abstraction.

9. (Original) The method of claim 1, wherein displaying includes displaying a three dimensional representation of the link.

10. (Previously Presented) A method for network analysis by presenting a layered network diagram on a visualization workstation, comprising:

storing in an object repository, at least one object representing a link between components of a network;

receiving a request to present the network topology represented by the at least one object in the object repository;

receiving input associated with a level of abstraction;

determining the level of abstraction based on the input;

filtering the at least one object based on the level of abstraction; and

displaying the at least one filtered object to present a layered network diagram.

11. (Original) The method of claim 10, wherein the level of abstraction limits the presentation to at least one protocol.

12. (Original) The method of claim 10, wherein the displayed objects represent a layer of an industry standard stack.

13. (Original) The method of claim 12, wherein the layer of the industry standard stack is selected from the group consisting of the layers of an Open System Interconnection (OSI) protocol stack.

14. (Original) The method of claim 10, wherein each displayed object represents a protocol.

15. (Original) The method of claim 14, wherein the protocol is selected from the group consisting of Internet Protocol (IP), Transmission Control Protocol (TCP), File Transfer Protocol (FTP) and Hypertext Transfer Protocol (HTTP).

16. (Original) The method of claim 10, wherein filtering includes identifying any object that represents a relevant propagated failure regardless of the level of abstraction.

17. (Original) The method of claim 10, wherein displaying includes displaying a three dimensional representation of the at least one object.

18. (Original) An apparatus for analyzing links between components of a computer system, comprising:

a processor;

a memory connected to said processor storing a program to control the operation of said processor;

the processor operative with the program in the memory to:

receive input associated with a level of abstraction;

determine the level of abstraction based on the input;

filter network links for display based on the level of abstraction; and

display the filtered network links to present a layered network diagram.

19. (Previously Presented) An apparatus for network analysis by presenting a layered network diagram on a visualization workstation, comprising:

a processor;

a memory connected to said processor storing a program to control the operation of said processor;

the processor operative with the program in the memory to:

store in an object repository, at least one object representing a link between components of a network;

receive a request to present the network topology represented by the at least one object in the object repository;

receive input associated with a level of abstraction;

determine the level of abstraction based on the input;

filter the at least one object based on the level of abstraction; and

display the at least one filtered object to present a layered network diagram.

20. (Original) An apparatus for analyzing links between components of a computer system, comprising:

means for receiving input associated with a level of abstraction;

means for determining the level of abstraction based on input;

means for filtering network links for display based on the level of abstraction; and

means for displaying the filtered network links to present a layered network diagram.

21. (Previously Presented) A apparatus for network analysis by presenting a layered network diagram on a visualization workstation, comprising:

means for storing in an object repository, at least one object representing a link between components of a network;

means for receiving a request to present the network topology represented by the at least one object in the object repository;

means for receiving input associated with a level of abstraction;

means for determining the level of abstraction based on the input;

means for filtering the at least one object based on the level of abstraction; and

means for displaying the at least one filtered object to present a layered network diagram.

22. (Original) A computer-readable storage minimum encoded with processing instructions for implementing a method for analyzing links between components of a computer system, the processing instructions for directing a computer to perform the steps of:

receiving input associated with a level of abstraction;

determining a level of abstraction based on the input;

filtering network links for display based on the level of abstraction; and

displaying the filtered network links to present a layered network diagram.

23. (Previously Presented) A computer-readable storage medium encoded with processing instructions for implementing a method for network analyzing by presenting a layered network diagram on a visualization workstation, the processing instructions for directing a computer to perform the steps of:

storing in an object repository, at least one object representing a link between components of a network;

receiving a request to present the network topology represented by the at least one object in the object repository;

receiving input associated with a level of abstraction;

determining the level of abstraction based on input;

filtering the at least one object based on the level of abstraction; and

displaying the at least one filtered object to present a layered network diagram.

Evidence Appendix